

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-41. (Cancelled)

42. (New) A medical packaging substrate comprising a paper-based web, the paper-based web being impregnated with a saturant comprising a latex polymer emulsion, the latex polymer emulsion comprising a polyacrylate having a glass transition temperature of -20°C or less, the saturant being present at an add-on level of from about 20 to about 80 dry parts per 100 dry parts of fiber in the paper-based web, wherein the medical packaging substrate exhibits a percent bacterial filtration efficiency of at least about 95%.

43. (New) The medical packaging substrate of claim 42, wherein the polyacrylate has a glass transition temperature of about -29°C or less.

44. (New) The medical packaging substrate of claim 42, wherein the polyacrylate has a glass transition temperature of about -43°C or less.

45. (New) The medical packaging substrate of claim 42, wherein the polyacrylate has a glass transition temperature of about -60°C or less.

46. (New) The medical packaging substrate of claim 42, wherein the saturant is present at an add-on level of from about 20 to about 70 dry parts per 100 dry parts of fiber in the paper-based web.

47. (New) The medical packaging substrate of claim 42, wherein the saturant is present at an add-on level of from about 20 to about 60 dry parts per 100 dry parts of fiber in the paper-based web.

48. (New) The medical packaging substrate of claim 42, wherein the saturant is present at an add-on level of from about 30 to about 50 dry parts per 100 dry parts of fiber in the paper-based web.

49. (New) The medical packaging substrate of claim 42, wherein the latex polymer emulsion comprises from about 60 to about 100 percent, on a dry weight basis, of the polyacrylate.

50. (New) The medical packaging substrate of claim 42, wherein the latex polymer emulsion comprises a blend of the polyacrylate and a polymer that is not a polyacrylate.

51. (New) The medical packaging substrate of claim 42, wherein the saturant comprises an additional latex polymer emulsion.

52. (New) The medical packaging substrate of claim 51, wherein the additional latex polymer emulsion has a glass transition temperature of -20°C or less.

53. (New) The medical packaging substrate of claim 51, wherein the additional polymer emulsion has a glass transition temperature of about -29°C or less.

54. (New) The medical packaging substrate of claim 51, wherein the additional polymer emulsion has a glass transition temperature of about -43°C or less.

55. (New) The medical packaging substrate of claim 51, wherein the additional polymer emulsion has a glass transition temperature of about -60°C or less.

56. (New) The medical packaging substrate of claim 42, wherein the medical packaging substrate exhibits a Gurley Hill porosity of greater than about 15 sec/100 cc.

57. (New) The medical packaging substrate of claim 42, wherein the medical packaging substrate exhibits a percent bacterial filtration efficiency of at least about 98%.

58. (New) The medical packaging substrate of claim 42, wherein the medical packaging substrate exhibits a percent bacterial filtration efficiency of at least about 99%.

59. (New) A medical packaging substrate comprising a paper-based web, the paper-based web being impregnated with a saturant comprising a latex polymer emulsion, the latex polymer emulsion comprising a polyacrylate having a glass transition temperature of -29°C or less, the saturant being present at an add-on level of from about 20 to about 70 dry parts per 100 dry parts of fiber in the paper-based web, wherein the medical packaging substrate exhibits a percent bacterial filtration efficiency of at least about 95% and a Gurley Hill porosity of greater than about 15 sec/100 cc.

60. (New) The medical packaging substrate of claim 59, wherein the polyacrylate has a glass transition temperature of about -43°C or less.

61. (New) The medical packaging substrate of claim 59, wherein the polyacrylate has a glass transition temperature of about -60°C or less.

62. (New) The medical packaging substrate of claim 59, wherein the saturant is present at an add-on level of from about 20 to about 60 dry parts per 100 dry parts of fiber in the paper-based web.

63. (New) The medical packaging substrate of claim 59, wherein the saturant is present at an add-on level of from about 30 to about 50 dry parts per 100 dry parts of fiber in the paper-based web.

64. (New) The medical packaging substrate of claim 59, wherein the latex polymer emulsion comprises from about 60 to about 100 percent, on a dry weight basis, of the polyacrylate.

65. (New) The medical packaging substrate of claim 59, wherein the saturant comprises an additional latex polymer emulsion.

66. (New) The medical packaging substrate of claim 65, wherein the additional latex polymer emulsion has a glass transition temperature of -20°C or less.

67. (New) The medical packaging substrate of claim 59, wherein the medical packaging substrate exhibits a percent bacterial filtration efficiency of at least about 98%.

68. (New) The medical packaging substrate of claim 59, wherein the medical packaging substrate exhibits a percent bacterial filtration efficiency of at least about 99%.